



Public Service Commission of Wisconsin

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PSC REF#:115660

Public Service Commission of Wisconsin
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June 23, 2009

Re: Investigation of Area Code Relief for the 715 Area Code in
Northern Wisconsin

5-TN-100

Investigation of Area Code Relief for the 920 area Code

5-TN-106

Telecommunications Providers in the 715 and 920 Area Codes:

The Public Service Commission of Wisconsin (Commission) considered the 715 and 920 area code relief dockets (5-TN-100 and 5-TN-106, respectively) at an open hearing on November 6, 2008. As the Commissioners noted in their deliberations, there is no option for area code relief that pleases everyone. Both methods of relief, either an overlay or a geographic split, have perceived pros and cons. However, for the 715 and 920 area codes, the Commission determined that an overlay is the best alternative because it allows for the most efficient use of Wisconsin's new numbering resources, it minimizes many potential implementation problems and because it does not impose a financial burden on those customers who may have been forced to change their area code. The Commission issued orders on December 9, 2008, approving the overlays of the 715 and 920 area codes and setting general guidelines for implementation.

During the course of the Commission's investigation, staff solicited Industry's input regarding the impact of area code relief from an economic, operational, customer education and competitive perspective. At no time did Industry express concern regarding area code specific trunks. As staff understands it, there are four services that rely on these types of trunks: E-911, operator, intercept and information services.

In March, AT&T asked to meet with Commission staff to discuss E-911 trunking in the 715 and 920 area codes. AT&T explained that E-911 trunking in Wisconsin is typically done via multi-frequency (MF) or CAMA (centralized automated message accounting) trunks. These analog trunks typically have an 8-digit dialing limitation which will be inadequate once mandatory 10-digit dialing begins in the 715 and 920 area codes. All facilities-based providers in these area codes that connect to a 911 tandem will need to take action to modify their current trunking arrangements prior to the start of mandatory dialing. Providers will have two options. First, the provider can install "duplicate trunking" which means that there will be a second set of dedicated (area code specific) MF trunks running between the central office and the 911 tandem. Second, providers can upgrade their current trunking from MF to a Signaling System 7 (SS7) digital trunk. From a technical standpoint, either option is satisfactory. AT&T believed that the state would benefit from a unified approach to E-911 trunking.

In order to gain a better understanding of the scope of any necessary changes and Industry's preference for addressing these trunking issues, staff issued a data request on April 13, 2009. The data request was sent to ninety-five ILECs and CLECs providing local service in the 715 and/or 920 area codes. Of the 91 respondents, 21 companies do not own facilities that connect to a 911 tandem. The responses from the remaining 70 companies can be summarized as follows:

- Current E-911 Trunking Arrangements: The majority of ILECs and CLECs surveyed currently use MF trunks to connect to 911 tandems in the 715 and 920 area codes. Of 70 respondents that provide E-911 trunking, 1 company uses SS7 trunks, 60 companies use MF trunks and 9 companies use a combination of MF and SS7 trunks.
- Industry's Preference for Addressing MF Dialing Limitations: The majority of ILECs and CLECs surveyed prefer to migrate to SS7 trunks in order to address the potential dialing limitations associated with the introduction of mandatory 10-digit dialing. Of the 70 respondents, 19 companies prefer to install duplicate MF trunks¹, while 51 companies prefer to migrate to SS7 trunks.
- Time Needed for Network Modifications: Industry reported a wide range of time which will be necessary to complete the E-911 trunking modifications. Estimates ranged from 0 weeks to 52 weeks,² with the average estimate being 13 weeks.
- General Concerns: There were five general concerns identified, including:
 - With SS7 trunks, there may be a loss of some enhanced features at the PSAP, including call party hold, re-ring and forced disconnect.
 - The type of E-911 trunking from any single end office to the tandem should be consistent.
 - The SS7 query introduces an additional point of potential failure. If there is a complete SS7 STP failure, the 911 call will fail. If the E-911 trunks are migrated to SS7, operator services trunks should remain MF so that customers will always have a means to call for help in an emergency.
 - AT&T has required MF trunking to its 911 tandems; therefore, that restriction would have to be removed before SS7 can be implemented in some areas.
 - A few companies indicated that their MF trunks are capable of 11-digit dialing. Therefore, these companies do not believe that it will be necessary for them to migrate to SS7 or to install duplicate MF trunks.

The April data request also included a question regarding area code specific trunks used to provide operator, intercept and information services. Of the 91 respondents, 61 companies have facilities to provide these services. The responses from these companies can be summarized as follows:

- Current Trunking Arrangements: All of the respondents that provide operator intercept and information services are currently using MF trunks.

¹ Of the 19 companies that prefer to install duplicate MF trunks, 11 companies are under common ownership, while the remaining 8 companies are independently owned.

² Mandatory 10-digit dialing in the 715/534 overlay is scheduled to begin on July 17, 2010, approximately 56 weeks from now. Any necessary planning, ordering and installation should be scheduled accordingly.

- Industry's Preference for Addressing MF Dialing Limitations: The majority of ILECs and CLECs surveyed prefer to migrate to SS7 trunks in order to address the potential dialing limitations associated with the introduction of mandatory 10-digit dialing. Of the 61 respondents, 18 companies prefer to install duplicate MF trunks³, while 43 companies prefer to migrate to SS7 trunks.
- Time Needed for Network Modifications: Industry reported a wide range of time which will be necessary to complete the trunking modifications associated with operator, intercept and information services. Estimates ranged from 2 weeks to 52 weeks, with the average estimate being 14 weeks.
- General Concerns: There were two general concerns identified, including:
 - The potential for technical difficulties if operator, intercept and information services are migrated to SS7 (no specific examples were provided).
 - If operator services trunks are migrated to SS7, pre-paid coin phones would also need to be modified. This additional work would be costly to the coin phone providers.

There appears to be some confusion about previous Commission "decisions" regarding E-911 trunking. Several years ago, various police and fire chiefs filed an informal complaint regarding the potential delays with connecting 911 calls to the PSAP, as well as parity in connect times between neighboring communities. There was never a proceeding initiated by the Commission, or Industry, to establish a standard statewide E-911 trunking arrangement. Rather, some local officials wanted to explore the idea of placing a recorded announcement on the line to inform callers that their call was in the process of being connected to the 911 center. In the end, the local officials were able to resolve their concerns directly with Industry and no formal Commission action was ever needed.

In considering the current E-911 trunking concerns, and in reviewing Industry's responses to the April data request, it seems unnecessary for the Commission to mandate a specific E-911 trunking arrangement for the 715 and 920 area codes. While most companies have expressed an interest in migrating to SS7, staff believes that this is ultimately a business decision that should be made by each individual company. Industry has reported that both MF and SS7 E-911 trunking arrangements successfully coexist in other states. Staff has no reason to challenge this position. What is important to stress is that the area code overlays will take place, 10-digit dialing for all local calls will be implemented, changes to trunking will be needed as a result of the area code changes and action on your part must be taken so there is no disruption to 911 calling. Thus, regardless of the trunking approach that your company elects to take, all network modifications must be made and be in place prior to the implementation of mandatory 10-digit dialing.

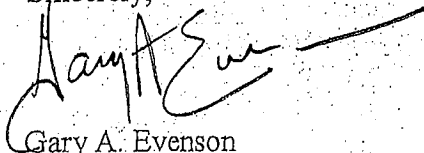
³ Of the 18 companies that prefer to install duplicate MF trunks, 10 companies are under common ownership while the remaining 8 companies are independently owned.

Dockets 5-TN-100, 5-TN-106

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Thank you for taking the time to respond to the April data request. I believe that the information provided by your company will benefit both Commission staff and Industry as we move forward with Wisconsin's pending area code relief efforts.

Sincerely,

A handwritten signature in dark ink, appearing to read "Gary A. Evenson", with a long horizontal flourish extending to the right.

Gary A. Evenson

Administrator

Telecommunications Division

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E911 Trunking Letter.doc

CC: Wisconsin State Telecommunications Association